Alabama, *H. dacotae* is not in Illinois, *H. sassacus* is not in Tennessee, *H. attalus* is not in Nebraska or Wisconsin, *P. origines* is not in Montana, *P. zabulon* is not in Wisconsin, *P. taxiles* is not in Nevada, *P. viator* is not in Maine, *P. hobomok* is not in the Sangre de Cristo Mts., *A. aesculapius* is not in Connecticut or New Mexico, *M. cofaqui* is not in N. Texas.

Some sedentary species are wrongly listed as strays (*C. goodsoni, P. errans, Agathymus* ("Brown Bullet") *estelleae, Pholisora mejicana*), and *Heliconius erato* is treated as a native with no mention that it is actually a very rare stray.

The flight periods listed are mostly correct (although *N. terlooti* flies in June-July also, *Colias alexandra* has two broods on the plains, *Boloria eunomia* has a several week flight period (not 4-5 days as stated), etc.). The number of broods for multivoltine southern species are underestimated throughout the book (*Eurytides marcellus* has 3-4 broods from April-October, not two, for instance); in many cases when only two broods are listed the number of generations per year is probably four or more.

The introductory material gives very elementary information for the beginner on anatomy and the life cycle, etc. Concepts such as photoperiod do not appear in the book. Flowers visited by adults, and adult migrations, are listed. There is nothing on mate-locating behavior in the book, although anecdotal reference to territoriality are given throughout the book, although the application of this concept to butterflies is disputed by research workers. Pheromones are attributed to *T. elada, S. hydaspe* and *L. creola*, when really they have never been studied. The white female form of *Ascia monuste* also migrates. *Colias behrii* is a subalpine, not an alpine, species, and the definition of alpine in the glossary ("pertaining to or inhabiting mountains") is peculiar.

Overall, the photos are excellent, and the text is suitable for the beginner, but the numerous errors mean that the book must be used with caution by lepidopterists.

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Butterflies of the Rocky Mountain States
Ferris, C. & F. M. Brown, eds., with 8 contributors (F. M. Brown, D. Eff, S. L. Ellis, C. D. Ferris, M. S. Fisher, L. D. Miller, J. A. Scott and R. E. Stanford). 1981. 442 p. Univ. Oklahoma Press.

This book should serve a useful purpose in allowing the identification of Rocky Mountain (exclusive of Canada and Alaska) butterflies and skippers, and presenting their distributions, and a little about their foodplants and habits. Overall, it is a good book, especially for distribution and identification. It does contain some errors, however. I have studied Rocky Mountain butterflies for 23 years, and hope these comments will be useful to Lepidopterists who use the book as a factual source.

The maps are the best feature of the book, and represent a considerable amount of effort by Stanford (and the reviewer); the one drawback of the maps is that the dots are placed in the middle of each county rather than at the exact collection site, which makes the ranges in mountainous and other non-uniform areas appear too large in many cases. The county lines usually run along the top of mountain ranges, so two

specimens from the top of a peak may be widely separated on the maps. The boundaries of the area covered as shown on the maps are not rigidly adhered to in the text: *Poladryas minuta minuta* from northeastern New Mexico is missing from the book (more on it later), as is *Euchloe creusa* which will probably be found in Glacier National Park, while *Atrytonopsis deva, Thymelicus lineola, Ancyloxypha arene, Precis evarete nigrosuffusa,* and *Ascia josephina* (a possible stray) do not occur near the region but are fully treated in the book, and the following are given full treatment even though they are almost certainly mislabeled from the region: *Thorybes diversus, Poanes zabulon, Pompeius verna, Wallengrenia egeremet, Piruna polingii, Emesia zela, Parrhasius m-album, Cyllopsis henshawi.* It should be noted that timberline is about 7500′ on the Montana-U.S. border, not 9000′ on p. 15 or 11000′ on p. 289.

The photos are black and white (except for several color plates), but are well done for the most part, although some are a bit faded (especially *Oeneis jutta*), the first photo of *Oeneis chryxus* is actually *O. uhleri*, the photos of *Cercyonis pegala damei* are *C. p. boopis*, the first photos of *Pieris sisymbrii* and *Cyllopsis henshawi* are females not males, the scale of the *"Pyrisitia" proterpia* and *Nathalis* photos is not 1X, and the *Everes comyntas* photos are of specimens that unfortunately resemble *E. amyntula.*

The authors are not properly credited in the text in many cases; one must consult the Table of Contents to find who authored what.

Butterflies are made to appear ferocious in the book. "Attacks", "mock combat", "pugnacity", "combative" and "territories" on pp. 60, 226, 228, 232, 346 and 348 are actually misinterpretations of male mate-locating behavior (see Amer. Midl. Nat. 91: 103). Actually, butterfly adults have no offensive weapons with which to fight, and it is the *larvae* which are often territorial (see J. New York Ent. Soc. 81: 214 and Oecologia 52: 415 for descriptions of larval battles) or even cannibalistic.

Considerable space in the book is devoted to purely taxonomic matters (type localities and dates of publication, type species of genera, etc. are given), which is surprising in a regional work. Numerous taxonomic changes are made, and comparing the scientific names with such books as Klots (1951) Field Guide, Ehrlich & Ehrlich's (1961) *How to Know the Butterflies*, and Howe's (1975) *Butterflies of North America*, the book is an orgy of splitting. The cabbage butterfly is no longer *Pieris*, the Tiger Swallowtail no longer is *Papilio*, etc., etc. A. Klots (Bull. Brooklyn Ent. Soc. 31: 154) and T. N. Freeman (Can. Ent. 68: 277) both published generic revisions of *Lycaena*, but their work is scrapped and numerous genera used which differ very slightly (*L. rubidus* and *L. xanthoides* in particular have very similar genitalia contrary to p. 229, and hybrids between them are known, see J. Res. Lepid. 8: 51 & 18: 50). Apparently the authors used the genera found in the new "*A Catalogue/Checklist of the Butterflies of America North of Mexico*" by L. Miller & F. Brown (Lepid. Soc. Memoir no. 2). That work, however, abolishes subgenera completely (not a single one is used), which is contrary to the opinions of most zoologists and is certainly not warranted by any rule of nomenclature or logic; therefore, these generic changes should be ignored by all zoologists except those few who share a disdain of subgenera. Some names in the book do differ from the Miller/Brown catalogue: the Catalogue uses *Polites coras* for *peckius**, *Euphyes ruricola* for *vestris**, *Agriades franklini* for *rustica (glandon**), *Atrytonopsis cestus margarita* for *python margarita**, *Euphilotes pallescens* for *rita pallescens**, *Celastrina*

ladon for *argiolus (argiolus ladon**), *Incisalia fotis mossii* for *mossii**, *Coenonympha ochracea, ampelos* and *inornata* as three separate species instead of ssp. of *C. tullia**, and *Erebia epipsodea rhodia** for *epipsodea* (the asterisks show the names that are probably correct). The studies of higher classification by P. Ehrlich, almost the only person this century who has scraped off the body scales to see what is beneath (Univ. Kansas Sci. Bull. 39: 305-370) are ignored, and doubtful categories such as Anthocharinae and Marpesiinae are used. *Anthocharis* and *Euchloe* actually belong in the *Pierinae* close to *Pieris*; all have the same foodplants and body enzymes (see J. Res. Lepid. 19: 181).

The following are detailed comments, arranged in taxonomic sequence, proceeding through the book from start to finish. *Hesperiidae.* The white fringed ssp. of *Thorybes pylades* does not occur in Idaho as stated on p. 71. *Erynnis propertius* and *meridianus* have the same genitalia, as do *E. zarucco* and *funeralis*, and appear to be conspecific (and see p. 79). The foodplant *Potentilla anserina* for *Pyrgus xanthus* is a misidentification of *P. hippiana*. *Amblyscirtes simius* does not perch late in the day, only in early morning (see J. Anim. Ecol. 42: 663); the observations reported were made after a dark thunderstorm, and are highly exceptional, if indeed they represent mate-locating behavior. *Amblyscirtes aenus* has been reared from eggs laid by *A. "erna"* (J. Res. Lepid. 15: 92), so *erna* is a form of *aenus*, not a species as implied on p. 94. *Amblyscirtes fimbriata* has orange fringes. The type locality of *Atrytone logan lagus* is Oak Creek, Fremont (not Custer Co., CO, which is probably an error anyway because the species does not occur in either county now. *Ochlodes sylvanoides napa* is a weak ssp. only in the Colorado Front Range, distinguished only by larger size (see Papilio (New Series) no. 1, available from the reviewer). *Polites sabuleti* is not alpine as stated in the figure caption on p. 118. *P. draco* and *sabuleti* actually have identical genitalia and no structural differences (contrary to p. 119), and apparent intermediates occur on Grand Mesa, Colorado. The *Festuca idahoensis* foodplant of *Polites sonora* is only a guess by E. J. Newcomer (J. Res. Lepid. 5: 243) (actually some moist meadow grass is more probable), and *Distichlis* is only a guess for *Atalopedes campestris* (by L. Orsak, Butterflies of Orange County, Univ. Calif. Press). *Hesperia comma colorado* is actually annual in appearance, and has adapted to the subalpine zone with a shorter developmental period (J. Lepid. Soc. 29: 156). It is not biennial as stated on p. 125. Ssp. *assiniboia* has an ochre VHW. *Hesperia woodgatei* males actually perch on hilltops (J. Res. Lep. 14: 1) and not in gullies as stated on p. 128. *Hesperia nevada* males usually perch on hilltops also. *H. pahaska* flies 1½ months (not 3) earlier than *H. leonardus montana*. The foodplant *Digitaria* of *Copaeodes aurantiaca* is an error by H. Tietz (An Index to the Described Life Histories, Hosts...; Allyn Museum). *Megathymus coloradensis* is treated as a species even though the latest revision by K. Roever in 1975 treated it as a ssp. of *M. yuccae* (p. 144 correctly notes the limited utility of chromosome counts). *M. streckeri texanus* is characterized by the large DHW postmedian spots in females, rather than the characters given.

Pieridae. Neophasia menapia tau is a synonym of *menapia* (the California coast ssp. was recently named ssp. *melanica*, Papilio no. 1). *Pieris napi*'s range decreased in eastern United States due to deforestation rather than due to competition with *P. rapae* as stated on p. 19 (see Amer. Nat. 118: 655). *P. napi* and *Anthocharis sara* are not semicrepuscular, they merely prefer shade. *Pieris chloridice* is misspelled twice on p. 150. L. Higgins' studies combining *Pieris chloridice beckerii, P. callidice*

occidentalis and *Euchloe ausonia ausonides* are ignored, and the combination *Anthocharis cethura pima* of T. Emmel and J. Emmel is ignored. *E. ausonia coloradensis* occurs only in the southern Rockies according to P. Opler's revision (J. Res. Lep. 7: 65), and ssp. *ausonides* occurs from central Wyoming northward. *Colias meadii elis* occurs in Glacier National Park, and possibly in NW Wyoming, and flies as strongly as ssp. *meadii* in the reviewer's experience. *C. eurytheme* has a spring form which is mostly yellow and is far from meaningless, being darker on VHW for better thermoregulation (see Proc. Nat. Acad. Sci. 63: 768). The appearance, habitat and behavior of *C. scudderii* and *gigantea* suggest they are conspecific, and the combination *C. scudderii gigantea* was proposed by John Masters. *Trifolium* is a lab host only for "*Pyrisitia*" *lisa*. *Stellaria media* (Caryophyllaceae) is probably an error for *Nathalis*.

Papilionidae. *Parnassius phoebus* actually hibernates as eggs. Ssp. *pseudorotgeri* occurs only in the San Juan Mountains, and not in the Sangre de Cristo Mountains. The reviewer does not know of any evidence that *Parnassius clodius* contains cyanide as stated. The yellow tegulae of *Papilio bairdii* are very useful for identification; they are much yellower than in *P. polyxenes*. Ssp. *dodi* appears to be a synonym of *P. bairdii brucei*. *Artemisia* is not a foodplant of *Papilio indra*. *Papilio rutulus* is probably a subspecies of *P. glaucus*, because they intergrade in southern British Columbia in male and female genitalia and wing pattern (Pan Pacific Ent. 52: 23), they intergrade in the Black Hills (Evolution 13: 40). Ssp. *canadenis* does not occur in the Black Hills as stated on p. 187, they merely resemble *canadensis* there because of the intergradation. Ssp. *arcticus* is an Alaskan form of *P. glaucus canadensis* that resembles *rutulus*, and not a ssp. of *rutulus* as stated on p. 188; *rutulus* does not occur north of SW British Columbia. *Magnolia* is not eaten by *Papilio palamedes* (J. Lepid. Soc. 16: 198).

Lycaenidae. *Apodemia mormo* ssp. *mejicanus* actually occurs in the region, not ssp. *duryi* which has a greater extent of more orange color and occurs in S. New Mexico. The report of *Lycaeides idas* from North America is confusing (p. 201). Actually, V. Nabokov's systematic studies (Bull. Mus. Comp. Zool. 101: 479-541) are perfectly correct; however nomenclatorial changes in Europe now mean that Nabokov's Palearctic species "*ismenias*" is a synonym of *argyrognomon*, and Nabokov's "*argyrognomon*" must be called *idas* (Forster, 1936, Mitt. Munich Ent. Ges. 26: 41-150). So all references to "*argyrognomon*" in North America must be changed to *idas*. The only two species of *Lycaeides* in North America are *melissa* and *idas*. *Plebejus acmon lutzi* does not eat *Lupinus* or *Astragalus* in the region; they are eaten in California and Arizona only. There are many reasons for using the species combination *Agriades glandon rustica* instead of *A. rustica* (J. Res. Lepid. 17: 101). O. Shields treated *pallescens* as a ssp. of *Euphilotes rita* (J. Res. Lepid. 16: 2). Alfalfa is not known to be eaten by *Everes comyntas* (the record referred to is actually *Medicago lupulina*, Black Medic). Ssp. *herrii* belongs to *E. comyntas*, not to *E. amyntula*. *Trifolium* is not eaten by *E. amyntula* as far as known. The Rocky Mountain ssp. of *Celastrina argiolus* is *ladon*, or possibly *sidara*, but definitely not *cinerea*, which is related to ssp. *echo* of California. The forms of *argiolus* in most of the Rockies are those that occur in ssp. *ladon*. *Amaranthus* is not a valid foodplant for *Brephidium exilis*. *Lycaena arota* males perch only in the morning, and males seldom patrol to find females (see J. Lepid. Soc. 28: 64). The arctic/alpine North American *Lycaena phlaeas* are very closely related to Scandinavian *L. phlaeas*

polaris, even to the extent of having the same form *caeruleopunctata* with blue spots on DHW; a relationship ignored in America. *Lycaena cupreus* in Montana, NW Wyoming, and Utah occurs in the Canadian Zone and represents a separate ssp. (ssp. *artemisia*, see Papilio no. 1). *Lycaena xanthoides editha* and *L. x. dione* are the proper combinations, not those used (see J. Res. Lepid. 18: 50). *L. xanthoides* is a perching species, contrary to p. 228 (see J. Lepid. Soc. 29: 63). *Lycaena heteronea gravenotata* is a very distinct ssp. (the book is correct in treating *klotsi* as a form). All references to *Lycaena dorcas* in the book actually refer to *L. helloides*, based on extensive foodplant and morphological data (see J. Res. Lepid. 17: 40). The specimens of "*dorcas*" illustrated are particularly similar to the *helloides* illustrated. Rocky Mountain foodplants of "*dorcas*" are *Polygonum* and *Rumex*, not *Potentilla* as stated on p. 233. Furthermore, Rocky Mountain "*dorcas*" oviposits on trash at the plant base as does *helloides*, whereas true eastern bog *dorcas* oviposits on the tops of shrubs (see Can. Ent. 41: 222). *L. helloides* hibernates as eggs. *Polygonum douglasii* is a valid foodplant of *Lycaena nivalis*, but an error for *L. mariposa* (this mixup is explained by E. Newcomer, see J. Res. Lepid. 2: 276). *Harkenclenus titus mopsus* does not occur in the region. *Quercus* foodplant of *H. titus* is an error by H. Tietz. *Satyrium behrii* has been in *Satyrium* since the work of Clench in 1961 (in *How to Know the Butterflies*), not since 1979. *Cercocarpus montanus* is not a valid *Satyrium saepium* foodplant. *Eriogonum* is an erroneous foodplant of *Satyrium californica. Incisalia augustinus* feeds on a variety of foodplants in California, but not in the east. *Mitoura spinetorum* has one brood only in the region (two broods occur in S. Arizona and New Mexico, see J. Res. Lep. 4: 233). The W. Colorado and SE Utah low altitude *Callophrys* populations actually seem to be somewhat intermediate between *C. sheridanii sheridanii* and *C. sheridanii comstocki*, the VHW line varying from straight, to kinked as in *comstocki,* and this line varies from a complete row of spots to nearly absent. On p. 260, 2nd line from bottom, "the region" should read "Colorado." *Fixsenia* is now used for the genus *Euristrymon* (see J. Lepid. Soc. 32: 279).

Satyrinae. Xyris torta (Xyridaceae) is an erroneous foodplant of *Megisto cymela*, another error by H. Tietz. *M. cymela* actually diapauses in the 4th instar (see J. Res. Lep. 18: 171). *Cyllopsis henshawi* seems to be the May-June brood of *C. pyracmon*, and *C. nabokovi* is the August-September brood; the same seasonal forms occur in *C. gemma*. To prove this, eggs of the first brood should be reared. *Cercyonis sthenele* from Salt Lake City actually resemble ssp. *silvestris* of California. *Poa* is only a lab foodplant of *sthenele. C. sthenele* and *meadii* interbreed extensively on the Kaibab Plateau just NW of the Grand Canyon, and actually ssp. *damei* is a ssp. of *sthenele* (not *pegala*) that has hybridized with *meadii* (the reviewer's 1980 research). Page 274 also mentions hybridization between the two in the Chuska Mountains (intermediate populations). These two do not appear to be completely distinct species, and may be allopatric subspecies, although the Kaibab hybridization does not appear to be completely random, perhaps because *sthenele* flies up from the Canyon and *meadii* prevails on the plateau. The dorsal stripes of *Cercyonis oetus* larvae are the same as those of *meadii* (see the detailed descriptions in W. Edwards' Butterflies of North America). Sedges are undocumented foodplants of *C. pegala. Neominois ridingsi* is always single brooded (the second broods reported for *Oeneis uhleri, alberta* and *polixenes* are also errors). Actually, *N. ridingsi* and *O. polixenes* are known to be biennial in some places (J. Res. Lep. 18: 171). *O. alberta* doubtfully

hibernates as a pupa (ibid.). *O. melissa beani* is characterized by its darker smoky black color, not the characters given. Arctic workers (K. Philip, C. dos Passos, pers. comm.) have found no essential difference between *Oeneis bore* and *taygete*, so *bore* should be the species' name.

Nymphalinae. Boloria eunomia dawsoni occurs only farther north than Wyoming, and only "*ursadentis*" occurs in Montana (see the map). Ssp. *ursadentis* and *laddi* are actually very similar to *caelestis*. The *Polygonum bistorta* foodplant listed for *eunomia* almost certainly refers to *Polygonum (Bistorta)* instead. The *Bistorta vivipara* foodplant listed for *eunomia* is a European host. *Viola "papilionacea"* foodplant of *Boloria selene* is a misidentification of *V. nephrophylla* (M. Epstein, pers. comm.), and *papilionacea* is not native to the region. *Boloria bellona* has only one brood in the Rockies. *Boloria frigga saga* is the ssp. in Alberta, and it probably occurs in N. Montana also. *Boloria epithore borealis* is a homonym of European *B. thore borealis*. The *Dryas* food of *Boloria alberta* is based on field association and lab oviposition only, although it is probably the field food. The new *Boloria acrocnema* is believed by the current revisers of *Boloria* (and by the reviewer, who has a mss. describing the complete life history and ecology) to be a subspecies of *B. improba*. The *Viola tricolor* (cultivated pansy) food of *Speyeria idalia* is only used in the lab. The neotype of *Speyeria nokomis* was caught by Mrs. Cockerell at Beulah, New Mexico, and sold to E. Oslar, based on correspondence from T. D. A. Cockerell to F. Benjamin of the Smithsonian. Therefore *nigrocaerulea* falls as a synonym of *nokomis*. Theoretically only the endpoints of a cline should receive names, so only the California-Nevada *nokomis apacheana* and the Arizona-New Mexico-southern Colorado *nokomis nokomis* should receive names and the intervening material should be left as clinal forms. *Speyeria hydaspe conquista* and *Speyeria zerene* were supposedly collected by A. Klots from the same two localities in new Mexico but have never been found since (M. Toliver mss. on the butterflies of New Mexico). Both are undoubtedly mislabeled specimens from Wyoming where Klots also collected. Neither species has been found south of northern Colorado. The probability that both occurred at the same two locations, then both became extinct at the same time in still-natural habitat, is infinitesimal. *Speyeria zerene cynna* is now treated as a synonym of *S. z. gunderi* (see J. Res. Lepid. 19: 242). *Speyeria egleis linda* also occurs in western Montana and in the Stansbury Mountains of Utah. The *Viola canadensis* food of *Speyeria cybele* is an association record only (by S. Ellis). *Euptoieta claudia* may actually lack a true diapause. The *Siphonoglossa* and *Ruellia* foodplants of *Phyciodes texana* are lab hosts only. Early stages of *Phyciodes mylitta* and *P. pallida* were published (see J. Res. Lepid. 14: 84, which gave all the differences that occur between these species and *P. orseis*). *Phyciodes mylitta callina* is an available name for the SW Colorado-New Mexico-Arizona ssp. of *mylitta*. The *Helianthus scaberrimus* foodplant of *Chlosyne gorgone* is a synonym of *H. laetiflorus*. *Rudbeckia laciniata* is the only Rocky Mountain host for *Chlosyne nycteis*, not the plants stated. *Chlosyne damoetas* is not strictly biennial, but rather "irregular" in life cycle length, because the half grown larvae diapause for a variable number of years, often two years but probably also 1-3 years or longer. Interestingly, the larva and pupa of *damoetas* are identical to those of *C. gabbii*. Lowland checkerspot larvae can diapause for several years (J. Res. Lepid. 18: 171), which seems to preadapt them for life in the alpine zone, so the alpine *damoetas* may be more closely related to lowland *Chlosyne* than current taxonomy suggests. Female

damoetas are variable also in Colorado; Alberta populations are somewhat intermediate to California populations. *Chlosyne leanira alma* occurs in west central Colorado (Mesa and Montrose Counties) and central Utah, and *C. leanira fulvia* occurs in SW Colorado (Archuleta, La Plata and Montezuma Counties). The two ssp. appear to intergrade in Kane County, Utah. The treatment of *Poladryas* is very poor. *P. minuta minuta* (missing from the book) occurs on the plains of Colfax County, New Mexico, where larvae have the typical red ground color. *P. minuta arachne* has whiter larvae and occurs only in the mountains (several thousand feet higher in altitude in Colfax County). These two subspecies have been hybridized and backcrossed in *nature* by releasing lab-raised females in front of wild males (the stocks from north (not west) Texas ssp. *minuta* and Colorado ssp. *arachne*) (see Pan Pacific Ent. 50: 9, 1974 not 1973), proving that there are no barriers in either courtship or development between them. This paper also mentioned series with intermediate tendencies. Ssp. *minuta* is not extinct as stated, being widespread in north Texas and E. New Mexico, although it is true that the most extreme phenotype is in Mexico (which is more extreme than the Kerrville Texas types of *minuta*). Recent studies published too late for the book place *Euphydryas anicia* as a subspecies of *E. chalcedona* (J. Res. Lepid. 17: 245). Page 331 supports this conclusion, mentioning intergrades between *chalcedona* and *"anicia" bernadetta* in N. Nevada and S. Idaho. The maps show that *chalcedona wallacensis* and *"anicia"* overlap considerably in range, but S. Kohler has found that the *anicia* are all at higher altitude, the *chalcedona* at lower altitude, and there are no known localities where they are sympatric, although they come close at St. Ignatius in Lake County. Ssp. *bernadetta* occurs locally in Madison County, Montana. *E. editha gunnisonensis* and *alebarki* and E. Nevada *lehmani* in the opinion of the reviewer are synonyms of *hutchinsi*. It is the adults of *Nymphalis californica* and not the pupae which hibernate (J. Res. Lepid. 18: 171). *Salix* and *Helianthus* are erroneous foodplants of *Nymphalis milberti*. *Tilia* is a very dubious foodplant of *Polygonia interrogationis*. *Celtis* is eaten unwillingly by *Polygonia comma* (see W. Edwards, Butterflies of North America), and the plants *Althaea, Ambrosia* and *Amboris* are errors of H. Tietz and are not eaten by *comma*. *Polygonia zephyrus* is a subspecies of *P. gracilis* (research of the reviewer); they have the same male genitalia, and are parapatric and intergrade in the Canadian Rockies. *Polygonia oreas* and *P. oreas silenus* have a second different genitalic form. *Ulmus* is a dubious foodplant of *Polygonia progne*. *Ludwigia* is an erroneous foodplant of *Precis coenia*. *Nigrosuffusa* is the Mexican ssp. of *Precis evarete* according to J. Hafernik's studies, and at any rate it does not occur in or near the region. Western Colorado records of *Limenitis lorquini* are errors, contrary to p. 351 (see the map). *Crataegus* is another H. Tietz error, rather than a valid *lorquini* foodplant.

Libytheidae. All *Libytheana bachmanii* in the region are probably migrants of ssp. *larvata*.

The length of this review does not imply that this is not a good book. It is a good book and contains more information than the average butterfly book. Its presentation of distribution information is excellent. Serious Lepidopterists should note the points presented above, and in the opinion of the reviewer the generic names used in W. Howe's book (*Butterflies of North America*) should be used rather than the genera used in this book.

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